This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claims 1-27 (canceled)

Claim 28 (new): The method of producing a linear di-substituted pyridinium compound, the method comprising the steps of:

(a) attaching a first pyridine compound selected from the group consisting of a 2-substituted pyridine compound, a 3-substituted pyridine compound and 4-substituted pyridine compound of the formula NC_5R_4-R'-X (1) to a solid support, to form a compound of the formula NC_5R_4-R'-Y-SUPPORT (2), wherein SUPPORT represents the solid support, R is selected from the group consisting of hydrogen, hydroxyl, and substituted and unsubstituted alkyl, alkoxy, aryl, alkaryl, aralkyl, and alkenyl groups, R' is a first linking group, X is a group which can react with the solid support to attach the first pyridine compound to the support, and Y is selected from the group consisting of a direct bond and a second linking group;

(b) forming a di-substituted pyridine compound of the formula ^{-}A-$^{+}NC_5R_4$-R'-Z (3) from a second pyridine compound

selected from the group consisting of a 2-substituted pyridine compound of formula (1), a 3-substituted pyridine compound of formula (1) and a 4-substituted pyridine compound of formula (1), which second pyridine compound may be selected from the group consisting of the same pyridine compound as the first pyridine compound and a different pyridine compound from the first pyridine compound, wherein A is a protecting group, and Z is a leaving group;

(c) reacting the compound of formula (2) formed in step (a) with the compound of formula (3) formed in step (b), to form a di-substituted pyridinium compound of the formula $^{-}A\text{-}^{+}NC_5R_4\text{-}R'\text{-}[^{-}Q^{+}NC_5R_4\text{-}R'\text{-}]_nY\text{-SUPPORT}$ (4), wherein Q^{-} is a counter ion and n=1;

(d) optionally, repeating step (c) as many times as required to obtain a compound of formula (4) wherein n is an integer of ≥ 2; and

(e) detaching the compound of formula (4) from the solid support, and reducing to form a di-substituted pyridinium compound of the formula $NC_5R_4\text{-}R'\text{-}[^{-}Q^{+}NC_5R_4\text{-}R'\text{-}]_n\text{-}X$ (5), wherein n is an integer, and Q^{-} and X are a counter ion and a group which can react with the solid support to attach the first pyridine

compound to the support respectively, which may be selected from the group consisting of the same Q and X as defined above in steps (c) and (a) respectively and different Q and X as defined above in steps (c) and (a) respectively.

Claim 29 (new): The method according to claim 28 wherein each R group is hydrogen.

Claim 30 (new): The method according to claim 28 wherein in step (d), step (c) is repeated such that in formula (5) n=20 to 100.

Claim 31 (new): The method according to claim 28 wherein the compound of formula (1) is prepared by reaction of a compound of formula Z'-R"-X with a pyridine compound, with protection of the X- group as necessary, wherein R" is a linker group and Z' is a suitable leaving group.

Claim 32 (new): The method according to claim 31 wherein the compound of formula (1) is prepared by reacting Br-R"-OH with t-butyldimethyl-chlorosilane (TBDMSCl) to form Br-R"-OTBDMS, which is reacted with a compound selected from the group consisting of 2-methylpyridine (2-picoline), 3-methylpyridine (3-picoline) and 4-methylpyridine (4-picoline) with deprotection of the X group to form NC_5R_4-R'-OH.

Claim 33 (new): The method according to claim 28 wherein linker group R' has no terminal carbon atoms.

Claim 34 (new): The method according to claim 28 wherein each group R' is the same and is selected from an alkylene group, an alkenyl-containing group, and a cyclopropanyl-containing group.

Claim 35 (new): The method according to claim 34 wherein each group R' is selected from the group consisting of a group $-(CH_2)_m-$, wherein m is an integer from 2 to 12, a group having from 2 to 12 carbon atoms containing at least one alkenyl group, a cis- $-(CH_2)_p$-cyclopropanyl-$(CH_2)_q-$ group wherein p and q are the same or different and are integers from 1 to 4, and a trans- $-(CH_2)_p$-cyclopropanyl-$(CH_2)_q-$ group wherein p and q are the same or different and are integers from 1 to 4.

Claim 36 (new): The method according to claim 28 wherein each group R' is different and is selected from an alkylene group, an alkenyl-containing group, and a cyclopropanyl-containing group.

Claim 37 (new): The method according to claim 36 wherein each group R' is selected from a group $-(CH_2)_m-$, wherein m is an integer from 2 to 12, a group having from 2 to 12 carbon atoms

containing at least one alkenyl group, a cis- $-(CH_2)_p-$ cyclopropanyl-$(CH_2)_q-$ group wherein p and q are the same or different and are integers from 1 to 4, and a trans- $-(CH_2)_p-$ cyclopropanyl-$(CH_2)_q-$ group wherein p and q are the same or different and are integers from 1 to 4.

Claim 38 (new): The method according to claim 28 wherein R' is selected from the group consisting of a group which comprises a fluorescent group and a group to which a fluorescent group can be attached.

Claim 39 (new): The method according to claim 38 wherein R' has a pendant alcohol group for attachment of a fluorescent group.

Claim 40 (new): The method according to claim 28 wherein in formula (1) X is selected from the group consisting of hydroxyl, carboxyl, thiol, and amine groups.

Claim 41 (new): The method according to claim 40 wherein X is a hydroxyl group.

Claim 42 (new): The method according to claim 41 wherein the compound of formula (1) is a compound of the formula $NC_5R_4-(CH_2)_n-OH$.

Claim 43 (new): The method according to claim 28 wherein the solid support material comprises an organic resin having functionality which can react with group X of the compound of formula (1).

Claim 44 (new): The method according to claim 43 wherein the solid support material comprises a member selected from the group consisting of trityl chloride and a functionalised polystyrene resin.

Claim 45 (new): The method according to claim 28 wherein group Y in formula (2) is an oxygen atom.

Claim 46 (new): The method according to claim 28 wherein in step (b) group X is converted to a mesyl (methanesulphonyl) group by reaction with mesyl chloride.

Claim 47 (new): The method according to claim 28 wherein A is selected from the group consisting of oxygen and BH_3-.

Claim 48 (new): The method according to claim 47 wherein A is oxygen, and the nitrogen atom of the second pyridine compound of formula (1) used in step (b) is converted to the N-oxide by reaction of the nitrogen atom of the pyridine group with a peracid.

Claim 49 (new): The method according to claim 48 wherein the peracid comprises m-chloroperbenzoic acid.

Claim 50 (new): The method according to claim 28 wherein counter ion Q^- in step (c) is an iodide ion.

Claim 51 (new): The method according to claim 28 wherein oligomers having the formula (5) are released from the solid support and reintroduced as reagents as an alternative to the second pyridine compound used in step (b).

Claim 52 (new): The method according to claim 51 wherein a compound of formula $NC_5R_4\text{-}R'\text{-}[^-Q^+NC_5R_4\text{-}R'\text{-}]_n\text{-}X$ (5) is converted to a compound of formula $^-A\text{-}^+NC_5R_4\text{-}R'\text{-}[^-Q^+NC_5R_4\text{-}R'\text{-}]_n\text{-}Z$ (5a) per step (b), and the compound of formula (5a) is then reacted with the compound of formula (2) formed in step (a) or (c), per step (d).

Claim 53 (new): The method according to claim 28 wherein oligomers having the formula (5) are released from the solid support and reintroduced as reagents in addition to the second pyridine compound used in step (b).

Claim 54 (new): The method according to claim 53 wherein a compound of formula $NC_5R_4\text{-}R'\text{-}[^-Q^+NC_5R_4\text{-}R'\text{-}]_n\text{-}X$ (5) is converted to a compound of formula $^-A\text{-}^+NC_5R_4\text{-}R'\text{-}[^-Q^+NC_5R_4\text{-}R'\text{-}]_n\text{-}Z$ (5a) per step (b), and the compound of formula (5a) is then reacted with the

compound of formula (2) formed in step (a) or (c), per step (d).

Claim 55 (new): The method according to claim 28 wherein the compound of formula (4) is detached from the solid support, and reduced to form a di-substituted pyridinium compound of the formula $NC_5R_4\text{-}R'\text{-}[^{-}Q^{+}NC_5R_4\text{-}R'\text{-}]_n\text{-}X$ (5) using an acid.

Claim 56 (new): The method according to claim 55 wherein the acid is hydrochloric acid, and counter ion Q^{-} is chloride.

Claim 57 (new): The method according to claim 28 wherein the di-substituted pyridinium compound is a linked dialkyl pyridinium compound.